Jungbunzlauer

Mineral fortification

in beverages

Benefits at a glance

Nutritional and health claims

Beverages fortified with minerals can be marketed with **nutritional or health claims**:

- Low taste impact even at high concentrations, enabling the use of required mineral dosages without compromising flavour
- Claims facilitate various marketing strategies for mineral-fortified beverages

Solubility

Jungbunzlauer minerals boast excellent solubility and rapid dissolution:

- Sufficiently soluble to achieve multiple times the recommended daily intake in a single serving
- Citrate salts can additionally function as buffering agents, enhancing product stability

For suspensions or turbid liquids, such as dairy alternatives, Jungbunzlauer provides **micronised forms of less soluble mineral salts**:

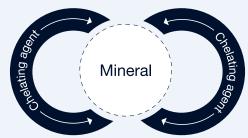
- · Improved mouthfeel
- · Enhanced dispersibility and better homogeneity

High bioavailability

Jungbunzlauer minerals are based on organic acids and are considered **nature-identical organic mineral salts**:

- Organic ligands like citrates or gluconates are chelating agents and shield minerals from substances that inhibit mineral availability
- · Organic mineral salts are more bioavailable than inorganic salts
- · Preferred source for superior nutritional products





Jungbunzlauer ingredients in function

Recommended daily intake

	Products	Solubility salts	Corresponding mineral solubility	NRV (Nutrient refrence value, EU)	DV (Daily value, USA)
Calcium salts	Calcium Lactate Gluconate Tricalcium Citrate	400 g/L 1 g/L	52 g Ca/L 0.2 g Ca/L	800 mg/d	1300 mg/d
Magnesium salts	Magnesium Lactate Trimagnesium Citrate Anhydrous Trimagnesium Citrate Nonahydrate Monomagnesium Citrate	84 g/L 200 g/L 16 g/L 270 g/L	8.4 g Mg/L (initial) 32 g Mg/L (stable) 1.9 g Mg/L 1.9 g Mg/L 23 g Mg/L	375 mg/d	420 mg/d
Potassium salts	Tripotassium Citrate Potassium Gluconate Potassium Lactate* (sold as 60% solution)	1780 g/L 590 g/L 600 g/L	640 g K/L 100 g K/L 180 g K/L	2000 mg/d	4700 mg/d
Zinc salts	Zinc Gluconate Zinc Lactate** Zinc Citrate	720 g/L 55 g/L 2.6 g/L	94 g Zn/L 13 g Zn/L 0.8 g Zn/L	10 mg/d	11 mg/d

^{*}not for use in the USA for fortification **not for use in the USA

Limitations in usage levels

EU

All products approved for food and beverage fortification according to Regulation (EC) No 1925/2006

USA*

- · When used in fortified food and beverages:
 - Magnesium Lactate: self-affirmed GRAS (Generally Recognized As Safe) up to 20% DV
 - Monomagnesium Citrate: self-affirmed GRAS up to 20% DV
- · Zinc Citrate: self-affirmed GRAS up to 100% DV
- · Zinc Lactate: not for use in the USA

*Information is provided here on selected ingredients only. For additional information, please see "JBL Beverage Campaign US Food Additive Regulatory Summary"

Value proposition













Neutral taste

High solubility

High bioavailability

Chelated minerals

Nutritional and health claims

Buffer salts